

516-21
ADH
1/10/69

Octal Package

An octal package debugging aid has been written for the DDP-516. This program permits entering information into core and dumping core from the Teletype keyboard-printer. The current version of the octal package occupies locations 170008-173378; expansion (if any) will be to higher locations. The standard entry to the octal package is a JST to 170008, which may be executed (because of the sectors) by an indirect JST to 778, where the link is stored. If it is necessary to enter the octal package by use of the console, begin execution in 170018.

The standard command format is an octal number followed by a control character. If no octal number is typed, then the number left over from the previous command is used. Otherwise, the number may be typed without supplying leading 0's. Typing errors may be corrected by typing a correct 16-bit number, because new digits are automatically inserted from the right and old digits shifted off the left. If an erroneous ("impossible") character is typed (e.g., "9"), the program responds by typing a question mark and ignoring that character.

The current list of commands follows:

- nS Snap (type) the content of location n. After execution of this command, n will have been increased by 1, so that repeated typing of S will dump succeeding memory locations.
- nD Dump a block of memory. The dump begins at n or the first location below n which is an even multiple of 8 (dump has 8 words per line), and continues until the state of Sense Switch 1 is reversed by the operator. Upon exit from the dump, n will be the location of the next word to be dumped.
- n: x,y,...,z;
Load sequential memory locations starting at n. The semicolon causes escape from this load command. Note that if an entry is null (2 adjacent commas), that location is skipped, and not loaded. Upon exit, n will be the location of the next word to be loaded.

- nT Plant a Trap (JST 778,*) in location n. This command does not alter the value of n.
- nJ Jump to location n. Restore the contents of the X,A, B,C registers to what they were upon entry into the octal package, unless these values have been changed by the following commands.
- nX Replace the saved X value by n.
- nA Replace the saved A value by n.
- nB Replace the saved B value by n.
- nC Replace the saved C value by n (the low-order bit).

516-21 - 3
ADH
6/24/69

EXTENDED OCTAL PACKAGE COMMANDS

The octal package has been enlarged to include the following commands:

nP

Execute the instruction at location n, but retain control in the octal package. If n is omitted, the instruction at location "P = ..." is executed, e.g., the next sequential instruction after the last "P" command. After the instruction has been executed, the P, X, A, B, and C registers are dumped, just as upon entry to the octal package. As indicated above, P contains the address of the next instruction to be executed.

nR

Dump sector n from disk (8 words). If n is omitted, the previous argument is used. After the disk has been read, n is increased by one.

nW: x,y,...,z

Write sector n on disk (8 words). If n is omitted, the previous argument is used; n is increased by one after execution. If any of the 8 words in the sector are left null, the words will be filled in from the previous R or W command.